A Study on Employability Skills of Engineering Students and Employers Expectations with Reference to Trichy

Dr.M.Ravichandran1 P.G.Abirami2
1Assistant Professor 2PG Student
1,2Anna University, BIT campus, Trichy, India

Abstract— The study on the selection of employability skills among engineering students. In this paper for the selection of employability skills are mentioned those are fundamental skills, technical skills, interpersonal skills and critical skills these are to be assess among the engineering student for the employment opportunities. The gap between the skills expected by the industry and actual skills possessed by the candidates are to be examined. Only the conceptual paper is been built. It should be properly done and get the job. So engineering students will get employability skills, it to be used for get a good job. In future this paper can be analyzed by using the ANOVA technique.

Key words: Employability Skills, Final Year Engineering Students, Employer’s Expectation, Employment

I. INTRODUCTION
Education is the process of knowledge, skills, values, beliefs, and habits. It is really a means to discover new things which we don’t know about and increase our knowledge. In India’s higher education system is third largest in the world. The first two places are United States and china. In India engineering and technology degree holders are 2,588,405 in census 2001. In India as 80 percent of the engineering graduates are unemployable.

According to ABET (Accreditation Board for Engineering and Technology) Engineering is the profession in which a knowledge of the mathematical and natural sciences gained by study, experience, and practice is applied with judgment to develop ways to utilize economically the materials and forces of nature for the benefit of mankind.

Unemployment Rate in India is 10.0 percent it will be taken at September 2016. Unemployment rate in Tamil Nadu urban-36, rural-45. In Slakh engineers only 17.45% are employable for the IT service sectors and 2.68% IT product companies (2011). In mechanical engineering unemployment rate is 6.3%, Civil engineering 12.8%, naval architecture 2.9%, computer engineering 6.7%, electrical engineering 3.7% engineers are not have job.

Therefore the engineering students are must have certain skills to gain a job. The skills are generic skills and lately known as employability skills. Employability has been defined as “the capability for gaining and maintaining employment”. Skill is the ability to carry out a task with pre-determined results often within a given amount of time and energy.

Australian Chamber of Commerce “Employability skills are those which support your ability to perform in the workplace, also known as transferable skills learned in one context which can be applied and further developed in other contexts and roles non-technical skills, also known as “soft skills” there is broad consensus about the attributes that employers expect to find in graduate recruits”

The students and graduates are highly motivated, have up-to-date skills and knowledge that can benefit for future. The employability was measured across three domains: IT roles (software engineer, IT product services, ITEs operations), engineering roles (Design engineering, sales engineer) and non-technical roles (business analyst, associate, creative content developer, technical content developer).

Students are not aware in the applications of theories in industry. The students are search the set of skills required by employers, that process is being looked in to only during the final year. It will start in first year they will surely get the job in final year. The employability skill is most important in student’s life for get job.

Employability skill is most important to get a job. The gap between the skills expected by the industry and actual skills possessed by the candidates. The most of engineering students are placed in IT, BPO, manufacturing industries, government, etc. This study is a descriptive study the data collection is primary data. The respondents are engineering students and employers.

II. STATEMENT OF THE PROBLEM
Most of the engineering students are not having a job, the major problems are insufficient understanding of basic concepts, not well-versed in their core subjects, lack of exposure, presenting themselves in not clear manner, low level of self-confidence, lack of communication skill, etc. Students are search the set of skills required by employers, that process is being looked in to only during the final year. So this study helps to improve their employability skills and helps them to improve and get employability for the company.

III. LITERATURE REVIEW
(Azami Zaharim) Studied the comparison of the differences and similarity of employability skills among engineering graduates in different countries. Nowadays employers give importance to employability skills. This is a significant of increasing unemployment. The result indicates these countries have necessary employability skills frameworks to prepare engineering graduates for employment. This paper suggests the engineering graduates must acquire a set of generic skills.

(Sokkalingam, 2014) Studied the M.B.A students’ ideas on the employability skills. It considered the M.B.A students’ personal features related to the factors of employability skills. The findings indicate the outcome of six factors were statistically significant.

(Rozario, 2016) Studied the different levels of employability skills in rural colleges. The results of the study may be useful to the government and skill development
agencies to design an activity to improve the level of employability skills of the rural MBA students. (Chung-Khain WYE, 2009) Investigated whether the undergraduates’ core competencies are able to meet with needs set by employers and analyses the effectiveness of personal qualities and development in private university. The result shows the undergraduates are all highly competent in possessing personal qualities and skills.

(Gowsalya,G, 2016) Studied the relationship between employability skills and parents qualification. It gives the idea for the appropriation of the employability skill among engineering students. In employability skills the parents can set out the key choice of students face their employment and developing the employability skills will need for success.

(Maribet. buenviaje, 2016) Studied the most employer faced in selection process of employees. The leadership skills and management skills are very important aspect of student outcomes. The MBA graduates are expected to possess good leadership qualities and usually a good decision maker.

(Mohd Yusof Husain, 2010) Studied to survey the importance of employability skills of engineering graduates done employers’ perspective. The result showed that employer rated the importance to a high level of employability skills.

(Mohd shamsuri Md Saad, 2013) Studied to explore the employability skills that students need to possess, as well as the employers’ perceptions. The results shows that problem-solving, tool handling expert evidence and presentation skills features are highly demanded of students by employers.

(TD) Studied to concentrates on their final year engineering students’ perception to gain industrial placement and increase the value in employability on graduation. The result shows a strong linkage between unique period of employability and placement.

(Mishra, 2016) Studied the value of employers as well as employee towards employability skills necessary for the entry level engineering graduates in companies. The result suggest the engineering graduate should acquire a set of generic skills that is good communication, personal skills, presentation skills, Technical Knowledge, Leadership skills, self-assessment and goal setting.

(Rao, 2016) Studied the basic structured employability skill behavior and to understand the effect of employability skills. The result shows that there is an enough scope for enhancement in skills among commerce students.

(Gurvinder kaur gurcharan singh, 2008) Studied to identify the perception of employers concerning the employability skills wanted in job market and graduates’ perception of their currently possessed employability skills. The result shows that younger employers tend to be favorable to graduates’ employability skills.

(G.Gowsalya, 2015) Studied the employability skills such as self-understanding, general management and work culture, leadership and problem solving ability and communication. The result shows the candidate who is having a multi-tasking skill to gain employment.

(Umme-Amen, 2014) Studied the gap between the performance of new graduates and employers’ expectations through knowledge, skills and abilities (KSA) in service sectors. The result shows that the gap does exist between the employer expectations and performance of new graduates.

IV. EMPLOYABILITY SKILL

Peter Knight & Mantz Yorke (HEFCE/DfES ESECT group) “A set of achievements, understandings and personal attributes that make individuals more likely to gain employment and to be successful in their chosen occupations”. Employability skills are “those basic skills necessary for getting, keeping, and doing well on a job” – Robinson. “Getting a job is not just about having the ‘right’ qualification it’s about your attitude, behavior, skills and abilities. These are known as employability skills.” Employability skills are generally divided into four skills sets fundamental skills, critical thinking skills, interpersonal skills, and technical skills.

A. Engineering Employability Skills

It can be defined as: “Ability to perform engineering related skills, knowledge and personal attributes to gain employment, maintain employment and succeed in the engineering field”. Most useful skills for employability skills for engineering students is English communication skill, written communication, team player, good problem solving skill, commercial awareness, self-motivation, flexibility, time management.

V. INTEGRATION OF EMPLOYABILITY SKILLS

A. Fundamental Skills

The ability needed to perform task. The basic ability necessary to function adequately in society. Skills are reading, writing, mathematics and communication.

B. Technical Skills

The knowledge and capabilities to perform specialized tasks related to technology. It also refers to the ability of a certain type of stock trader who uses technical analysis to buy and sell stocks.

C. Critical Thinking skills

“The process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and evaluating information to reach a conclusion”

D. Interpersonal skills

The set of abilities enabling a person to interact positively and work effectively with others. In the business domain, the term
refers to an employee’s ability to get along with others while getting the job done.

VI. EMPLOYERS EXPECTATION

Some of the skills employers are looking for,
- Written Communication – Able to express yourself clearly in writing.
- Verbal Communication – Able to express your ideas clearly and confidently in speech.

<table>
<thead>
<tr>
<th>Fundamental skills</th>
<th>Critical Thinking skills</th>
<th>Personal skills</th>
<th>Technical skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Reading</td>
<td>- Learning</td>
<td>- Responsible</td>
<td>- Exchanging e-mail</td>
</tr>
<tr>
<td>- Writing</td>
<td>- Reasoning</td>
<td>- Self-confidence</td>
<td>- Microsoft word(using)</td>
</tr>
<tr>
<td>- Science</td>
<td>- Thinking creatively</td>
<td>- Self-control</td>
<td>- Microsoft excel(using)</td>
</tr>
<tr>
<td>- Math</td>
<td>- Decision making</td>
<td>- Social skills</td>
<td>- Basic computer science skills</td>
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<tr>
<td>- Oral communication</td>
<td>- Problem solving</td>
<td>- Honest</td>
<td>- Subject knowledge</td>
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<tr>
<td>- Listening</td>
<td>- Planning</td>
<td>- Integrity</td>
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Table 1: Employability Skills

- Drive – Determination to get things done. Constantly look for better ways of doing things.
- Initiative / Self- management – Able to act on imitative, identify opportunities and proactive in putting forward ideas and solutions.
- Time Management – Manage time effectively, prioritising tasks and able to work to deadlines.
- Numeracy – Able to carry out arithmetic operations/understand data.
- Self- Awareness – Awareness of achievements, abilities and areas of development.
- Professionalism – Pays care and attention to quality of their work.

VII. FRAMEWORK OF THE STUDY

The main objective of this paper is this to find the gap between the employee’s expectations with the candidate.

VIII. CONCLUSION & DISCUSSION

The selection of employability skills in engineering students had be studied and the employers expectation to employment the candidates by the descriptive study. This helps to give an idea for engineering students about employability skills. This study helps to understand the concept of employability skills in students and employers expectations to recruit the candidates. For the future study this paper can implement and by using the independent t-test can apply and help to improve the employability skills in future.

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